From five transits of the Sun's diameter made on the afternoon of June 15, and ten measures of the diameter in N.P.D. made on the afternoon of June 17, with the same instrument and by the same observers, the apparent corrections to the tabular semidiameter of the Sun were found to be :—

$$\text{in R.A.} = -0^{s}\cdot029 = -0''\cdot40$$
$$\text{in N.P.D.} = \quad -1'\cdot01$$

The telescope of the south-east equatoreal has an aperture of 12·8 inches, and a magnifying power of 295 was used.

Advantage was also taken of the circumstance that both the following vertical and lower horizontal limbs of the Moon were in turn projected on the Sun to take an altazimuth observation in the ordinary way. A correction of $-3''$ was applied to the interpolated tabular semidiameter of the Moon, and the corrections to tabular R.A. and N.P.D. of the Moon were then deduced as $-0^{s}\cdot40$ and $-5''\cdot0$.

Applying the corrections to tabular places and semidiameters indicated by the south-east equatoreal observations, a computation was made of the time of geometrical first contact, which gave $5^{h}\ 2^{m}\ 4^{s}$ G.M.T., the N.A. time being $5^{h}\ 2^{m}\cdot2$.

The weather was very unfavourable during the eclipse. Most of the observations were made through cloud, and the cusps and limbs were sometimes very faint indeed and difficult to observe.

Royal Observatory, Greenwich:
1891 *August* 7.

Observations of the Transit of Mercury, 1891 *May* 10.

By W. J. Macdonnell.

I forward a few notes on the Transit of *Mercury* as observed here with a 6-inch Equatoreal Refractor, by Grubb, of Dublin. The geographical position of Port Macquarie is South Latitude 31° 27′, East Longitude $10^{h}\ 11^{m}\ 40^{s}\cdot41$ ($6^{m}\ 49^{s}\cdot60$ East of Sydney).

May 10 was a clear, bright day, but definition was disturbed, the Sun's limb boiling and very unsteady. The times were taken from a sidereal clock in local sidereal time, and reduced to Sydney Mean Time, the clock error being found from star transits on the evening before and after the Transit of *Mercury*.

Ingress.

	h	m	s	
First Contact	9	59	30	Noted a little too late, perhaps about 20 seconds. ⊙'s limb very unsteady.
Second Contact	10	4	4	No black drop, but a hazy ligament formed; the time noted was the appearance of a light between *Mercury* and Sun.

Egress.

	h	m	s	
First Contact	2	50	16·5	Definition improved; time noted at first formation of ligament. Observation considered fair.
Last Contact	2	55	3·5	A little too soon, as both planet and Sun were unsteady.

No halo was seen round the planet, nor any light speck on its disc, although carefully searched for.

My telescope has a clear aperture of 6 inches, 97 inches focus. A Kellner eyepiece, power 70, was used for the contacts, and negative eyepieces of 110 and 200 for physical observations during the Transit. A solar diagonal and tinted wedge were used in conjunction with the eyepieces.

A few spots were observed on the Sun, forming a strong contrast with the intense blackness of *Mercury*. At intervals during the Transit the definition was good, *Mercury* bearing the power of 200 well, but no signs of an atmosphere were visible. I remember seeing a luminous halo round *Venus* during the Transit of December 1874, but nothing of the kind could be traced on this occasion.

Port Macquarie, New South Wales:
1891 *May* 14.

The Conjunction of Venus and Jupiter, 1891 *April* 7, *observed at Windsor, New South Wales.* By John Tebbutt.

Australia was well situated for the observation of the near approach of the planets *Venus* and *Jupiter* on April 7, 1891. Notwithstanding occasional clouds, I succeeded in obtaining twelve good measures of the differences of right ascension and of north polar distance with the filar micrometer of the 8-inch equatoreal. The steadiness and definition of the images were unusually satisfactory, and the individual measures very consistent. The following are the results, together with a comparison of them with those derived by interpolation with second differences from the *Nautical Almanac*. The correction for the defective illumination of *Jupiter's* western limb is insensible. The differential co-ordinates correspond to the mean of the twelve transits of *Jupiter's* centre over the single micrometer thread, which itself corresponds to $19^h\ 9^m\ 39^s{\cdot}9$ sidereal, or $18^h\ 6^m\ 27^s{\cdot}3$ mean time, at Windsor.